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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/222,073	12/29/1998	THOMAS B. SCHALK	5494:39	3686

7590

07/30/2002

DAVID H JUDSON
HUGHES & LUCE
1717 MAIN STREET
SUITE 2800
DALLAS, TX 75201

EXAMINER

AZAD, ABUL K

ART UNIT

PAPER NUMBER

2654

DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/222,073

Applicant(s)

SCHALK ET AL.

Examiner

ABUL K. AZAD

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 May 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 13-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 13-16 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. This action is in response to the communication filed on May 6, 2002.
2. Claims 1-5, 7, 13-16 and 18 are pending in this action.
3. After careful review of the applicant's arguments the examiner has decided to withdraw the finality of the rejection sent to the applicant on November 6, 2001 (Paper No. 9).

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the entry of second spoken digit string, analyzing the second spoken digit string and selecting the recognized string in accordance with a comparison of the first and second list must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-5, 7, 13-16 and 18 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as

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to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. As per claim 1, the specification does not describe, "prompting entry of a second spoken digit string". However, specification is described, "the user is prompted to repeat the string" so that for examination purpose it is interpreted as "prompting entry of said digit string again; (f) analyzing said digit string . . . said spoken digit string".

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is not clearly claimed what applicant meant by prior to step (a).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1-5, 7, 13-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldberg (US 6,122,612) in view of Waibel et al. (US 5,712,957) newly cited.

As per claim 1, Goldberg teaches, "a method of recognizing a spoken digit string," comprising:

"(a) receiving the spoken digit string" (col. 2, lines 45-65, input identifier);

"(b) analyzing the spoken digit string to generate a list of hypothesized digit strings arranged in ranked order based on a likelihood of matching the spoken digit string" (col. 7, lines 1-36, here check-sum operation is used to generate a list of digit string and col. 9, line 24 to col. 10, line 61; here a list of digit strings are arranged based on the likelihood score 'probability score' and any score below the predetermined threshold should be eliminated);

"(c) determining whether individual hypothesized strings of said list satisfy a given constraint, using a given knowledge based recognition strategy" (col. 10, lines 62-67, reads on "compares each remaining substitute identifier with the reference identifiers in data base");

"(d) selecting the first string in the list satisfying the constraint as the recognized string" (col. 10, line 66 to col. 11, line 11; at least one match is found, the user is accepted);

"if none of the hypothesized digit strings satisfy the constrain, (e) prompting entry of the input identifier again" (col. 6, lines 6-11, prompted to provide the input identifier again).

Goldberg does not explicitly teach, "analyzing said spoken digit string to generate a second list of hypothesized digit strings arranged in ranked order based on a likelihood of matching said spoken digit string and selecting the recognized string in

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accordance with a comparison of the first and second list". However, Waibel teaches as per Fig. 3 and 4, from a spoken entry, engine 14 generates n-best list and score locate error create alternative list input alternative list to engine 14, Re-spoken the said spoken entry, engine 14 produces secondary alternative list from secondary utterance, and comparison of primary and secondary list a best match is found. Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to use Waibles teaching in the invention of Goldberg so that a high degree of accuracy is maintained in finding a match for an input identifier (col. 2, lines 16-23).

As per claim 2, Goldberg teaches, "said knowledge based recognition strategy comprises a database matching scheme" (col. 5, lines 4-18, database).

As per claim 3, Goldberg teaches, "wherein step (c) comprises searching a database of valid data strings to determine whether any of the hypothesized digit strings match one of the valid digit strings" (col. 5, lines 4-18).

As per claim 4, Goldberg teaches, "wherein the knowledge based recognition strategy is a checksum scheme" (col. 5, lines 4-18, checksum).

As per claim 5, Goldberg teaches, "wherein the spoken digit string includes a checksum digit, and wherein step (c) comprises calculating a checksum of the hypothesized digit strings and determining whether the checksum matches the value of the checksum digit" (col. 5, lines 19-35).

As per claim 7, Goldberg does not explicitly teach, "wherein the checksum scheme utilizes a Luhan Checksum algorithm." However, the applicant acknowledges that Luhn checksum algorithm is well known in the art (Specification Page 9). Therefore,

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it would have been obvious to one of ordinary skill in the art at the time of the invention to use the checksum scheme as a Luhan Checksum algorithm because the choice of the Checksum algorithm is routine experimentation and optimization in the absence of criticality.

As per claim 13, Goldberg teaches, "wherein the knowledge based recognition strategy is a digit positional strategy and the constraining is a given digit position" (col. 5, lines 36-59).

As per claim 14, Goldberg teaches, "wherein the knowledge based recognition strategy is a digit string length strategy and the constraint is a given digit string length" (col. 5, lines 36-59).

As per claims 15 and 16, they are interpreted and thus rejected for the same reasons set forth in the rejection of claim 1.

As per claim 18, Goldberg does not explicitly teach to prompt entry of a spoken digit string prior to step (a). However, Goldberg teaches to prompt entry of an identifier again (col. 6, lines 1-11). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to prompt entry of a spoken digit string prior to step (a) so that the system will ready to except an input identifier for further process.

Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Abul K. Azad** whose telephone number is **(703) 305-3838**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Marsha D. Banks-Harold**, can be reached at **(703) 305-4379**.

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Any response to this action should be mailed to:

Commissioner for Patents

Washington, D.C. 20231

Or faxed to:

(703) 872-9314

(For informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center's Customer Service Office whose telephone number is **(703) 306-0377**.

Abul K. Azad

July 25, 2002

Vijay Chawan 7/27/02
VIJAY CHAWAN
PRIMARY EXAMINER